

# Frog and Toad Survey 2002

By Jessica Kitchell, Bob Hay, and Brian Dhuey

## **Abstract**

Survey sites with American toad, Blanchard's cricket frog, Northern spring peeper, eastern gray treefrog, bullfrog, green frog, and wood frog were at or above their long-term averages. Of the 12 anuran species, 5 showed an increase in percent occurrence in 2002 from the 2001 levels. However, the number of frog survey routes decreased to 84 in 2002 from 89 in 2001 and remain below the goal of 2 per county.

## **Introduction**

The Wisconsin Department of Natural Resources (WDNR) has coordinated a volunteer frog and toad survey since 1984. The survey arose from concerns about declines in populations of some frog species and was endorsed and expanded by the WDNR Surveys committee in 1990. Wisconsin has 12 anuran species. One species (Blanchard's cricket frog) is endangered and 2 species (Bullfrog and Pickerel frog) are included on the Natural Heritage working list as "special concern". In general, anurans are considered to be good indicator species for the habitats where they are found.

## **Methods**

Survey routes are distributed statewide, with a goal of 2 survey routes in each county of Wisconsin. Survey routes consist of 10 sites which are monitored 3 times yearly, 8-30 April, 20 May - 5 June, and 1-15 July. Surveys are started at dusk on evenings with wind velocities of less than 8 miles per hour. Water temperature is recorded at each stop where possible. The occurrence of each frog species is determined at each site by presence or absence of their song. The abundance of each species is ranked by the relative number of calling individuals. Stops with species calling in which individuals can be counted and there is no overlap in calls has an abundance rank of 1. When calls of individuals can be distinguished but there is some overlapping of calls the abundance rank is 2. When calls are constant, continuous and overlapping (full chorus) the abundance rank is 3. Percent occurrence is determined for each species specific to geographic range and peak calling periods. Survey data are analyzed using the Statistical Analysis System (SAS). The calling index for each species was summed to provide an index to the route population each year. These route populations are regressed on time to create a species population trend.

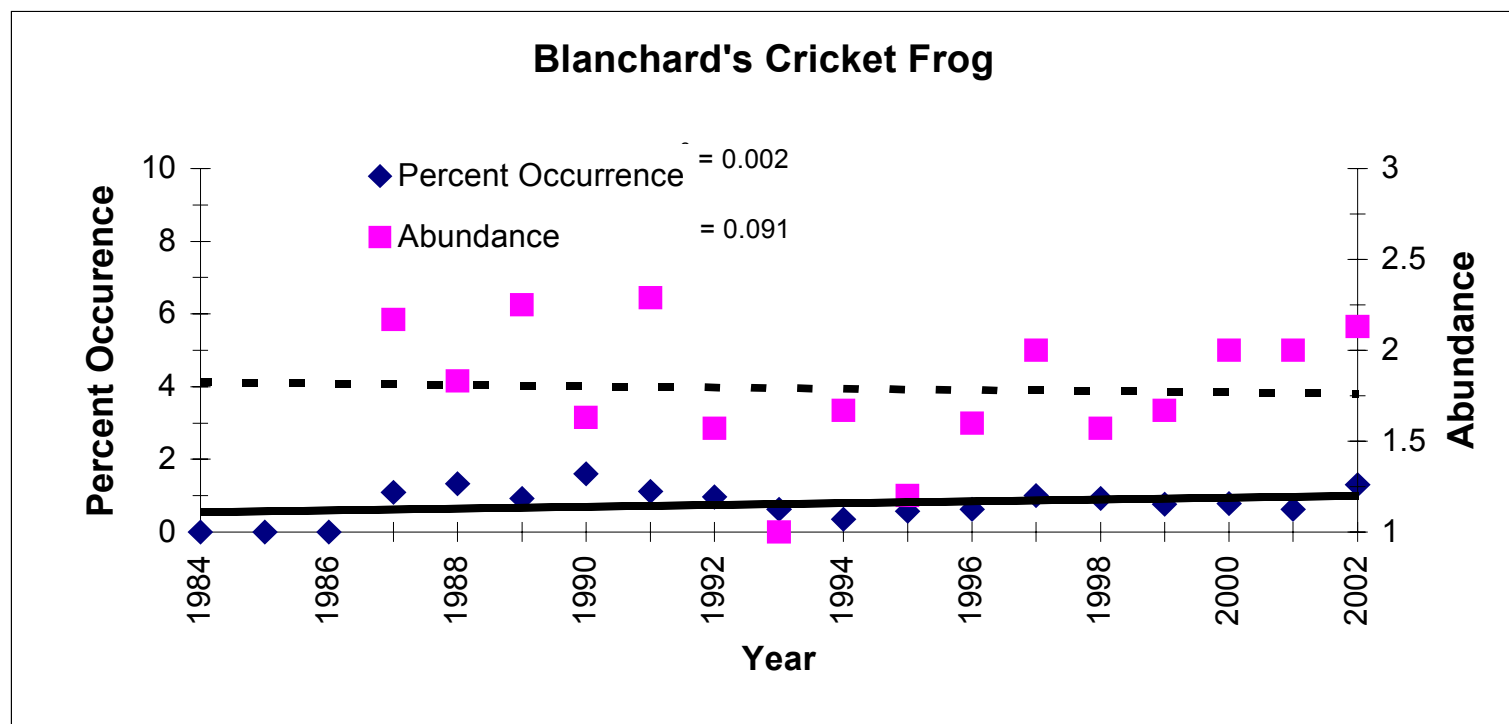
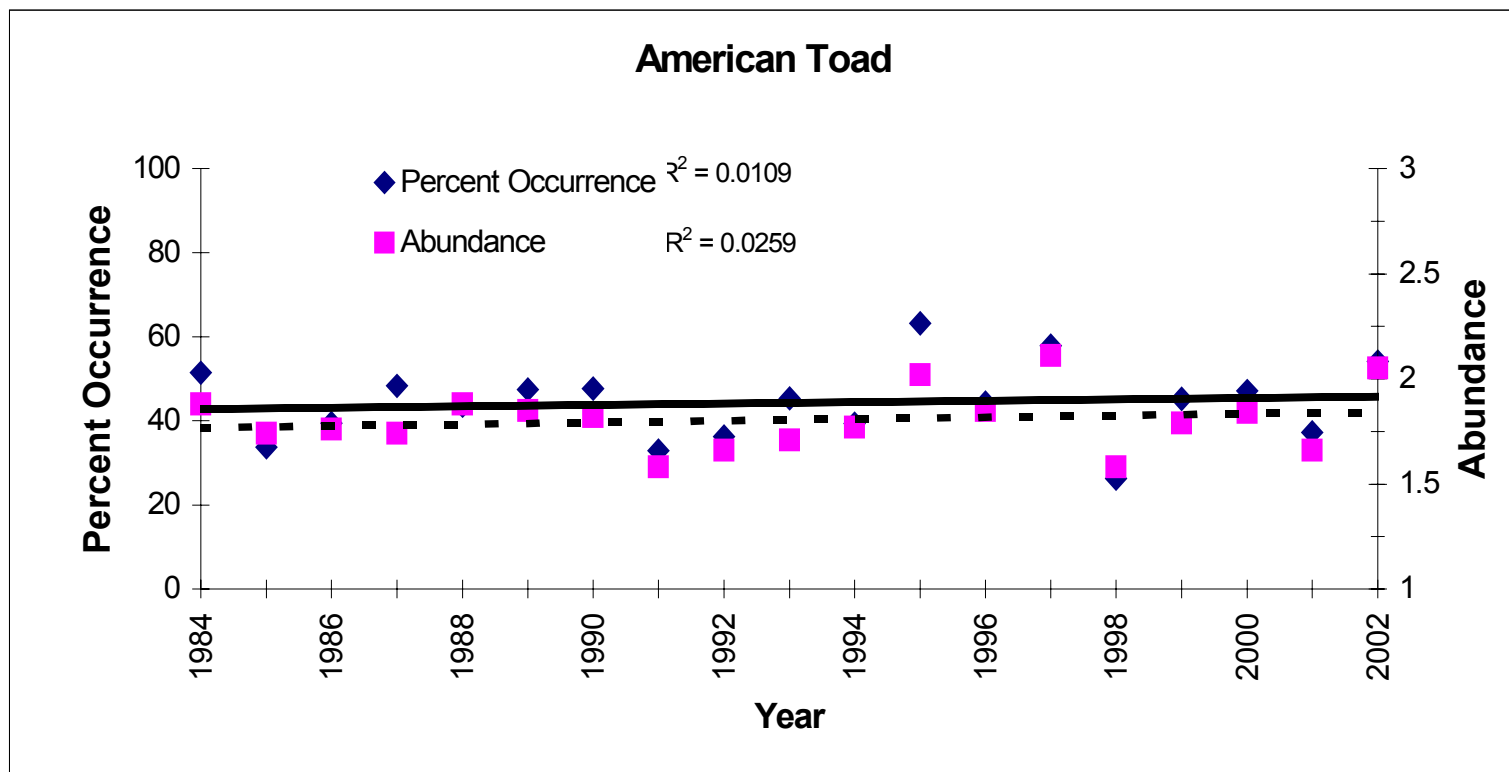
## **Results**

The number of survey routes run decreased from 89 in 2001 to 84 in 2002. Observers decreased from last year's level of 89 to 81 in 2002 (Fig. 1). The number of routes run in each county is still well below our goal of 2 per county (Fig. 2).

Of the 12 anuran species, 5 showed an increase in percent occurrence in 2002 from 2001 levels. These were the American toad, Blanchard's cricket frog, Cope's gray treefrog, Eastern gray treefrog, and northern leopard frog. (Fig. 3). The northern spring peeper, bullfrog, green

frog, and wood frog were above their long-term means, but down from their 2001 occurrence levels. The chorus frog, pickerel frog, and mink frog were below the previous year's occurrence levels and the long-term mean. Population trends, based on the call index, for each anuran species can be reviewed in Figure 3.





**Figure 3.** Percent occurrence and abundance of the 12 anuran species in Wisconsin, 1984-02.

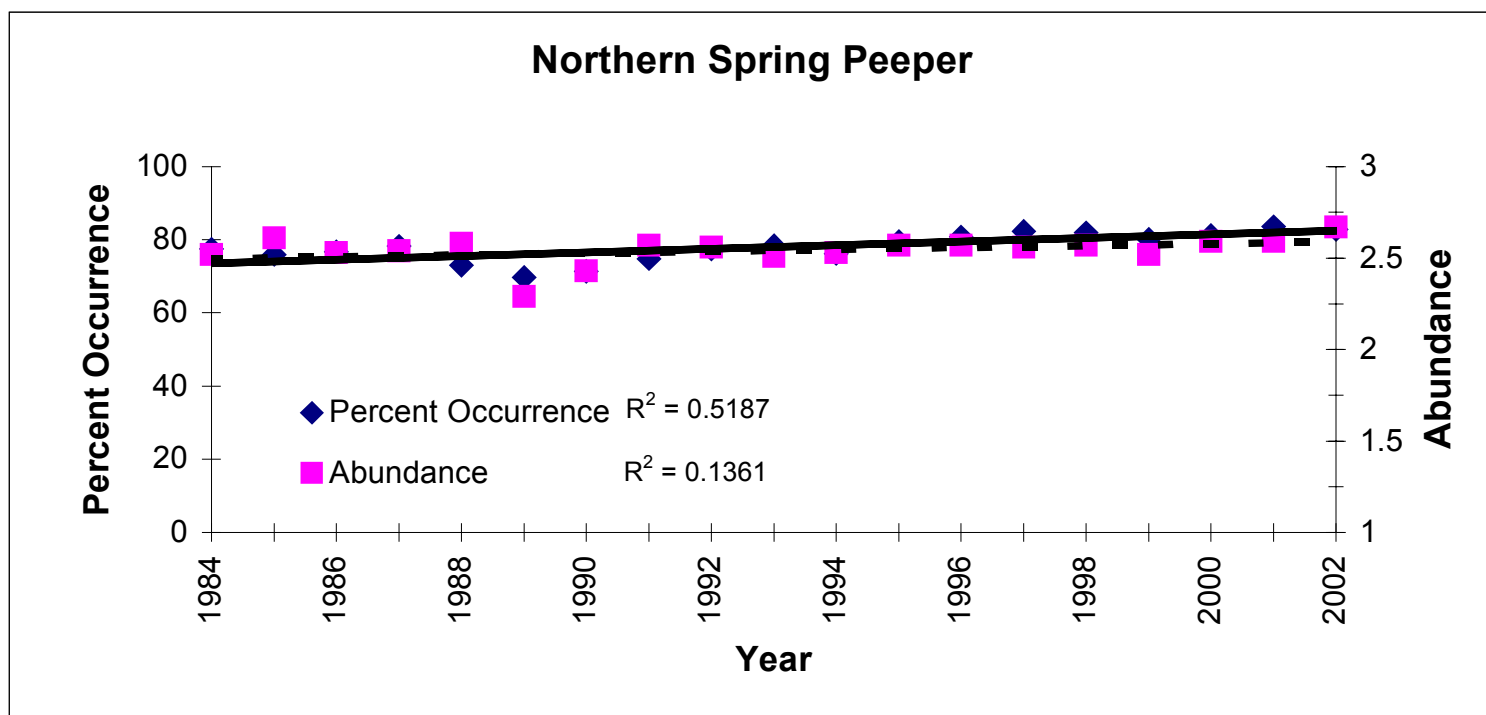
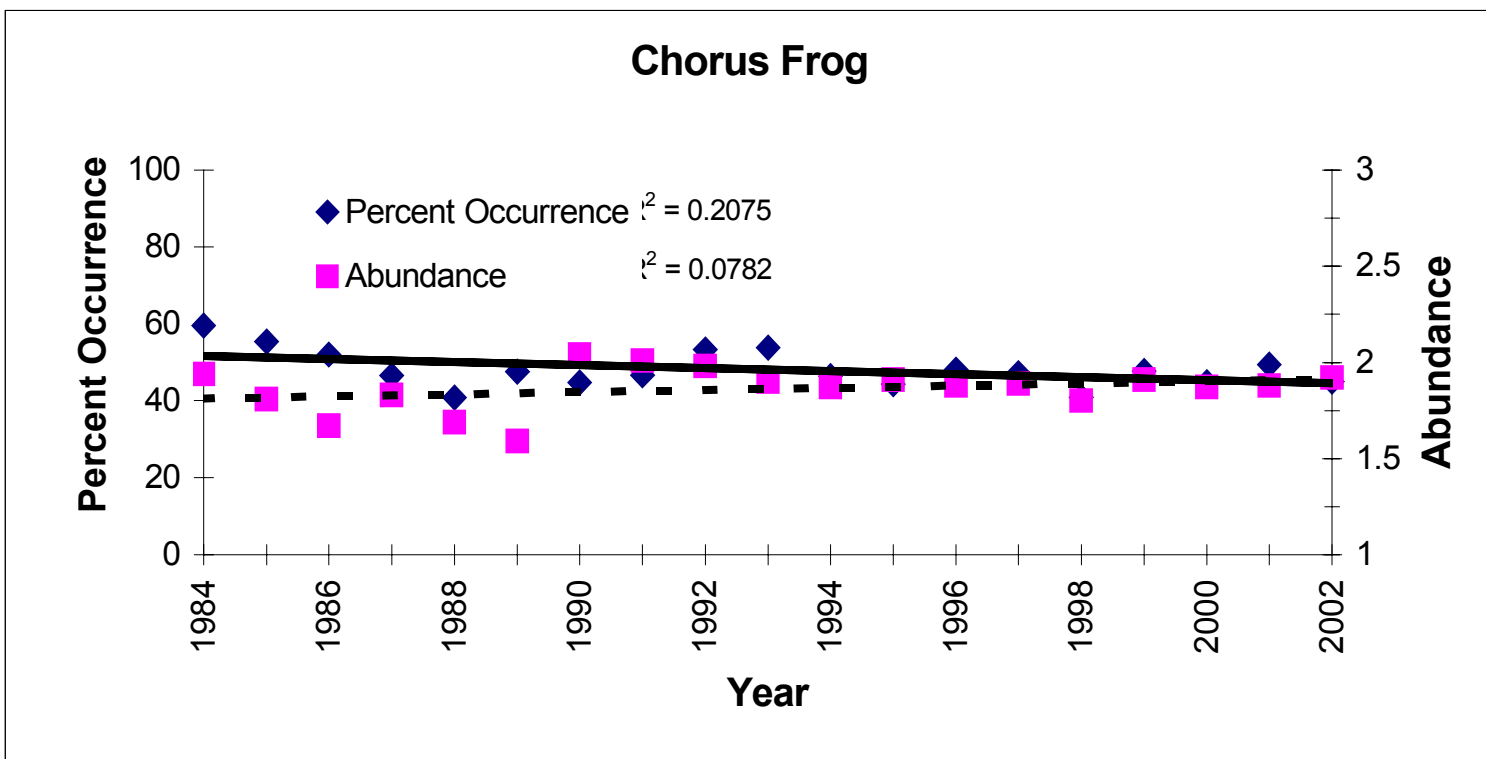


Figure 3. Continued.

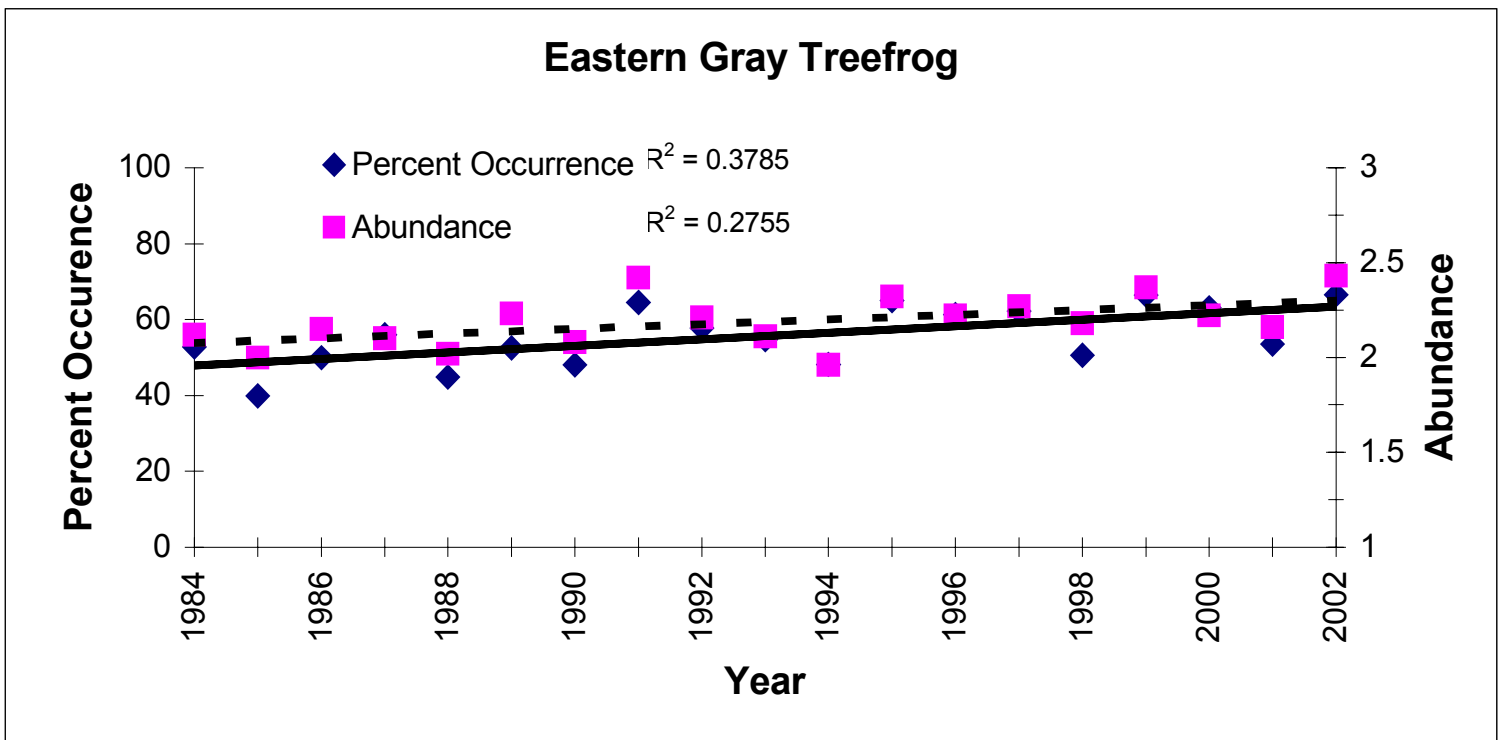
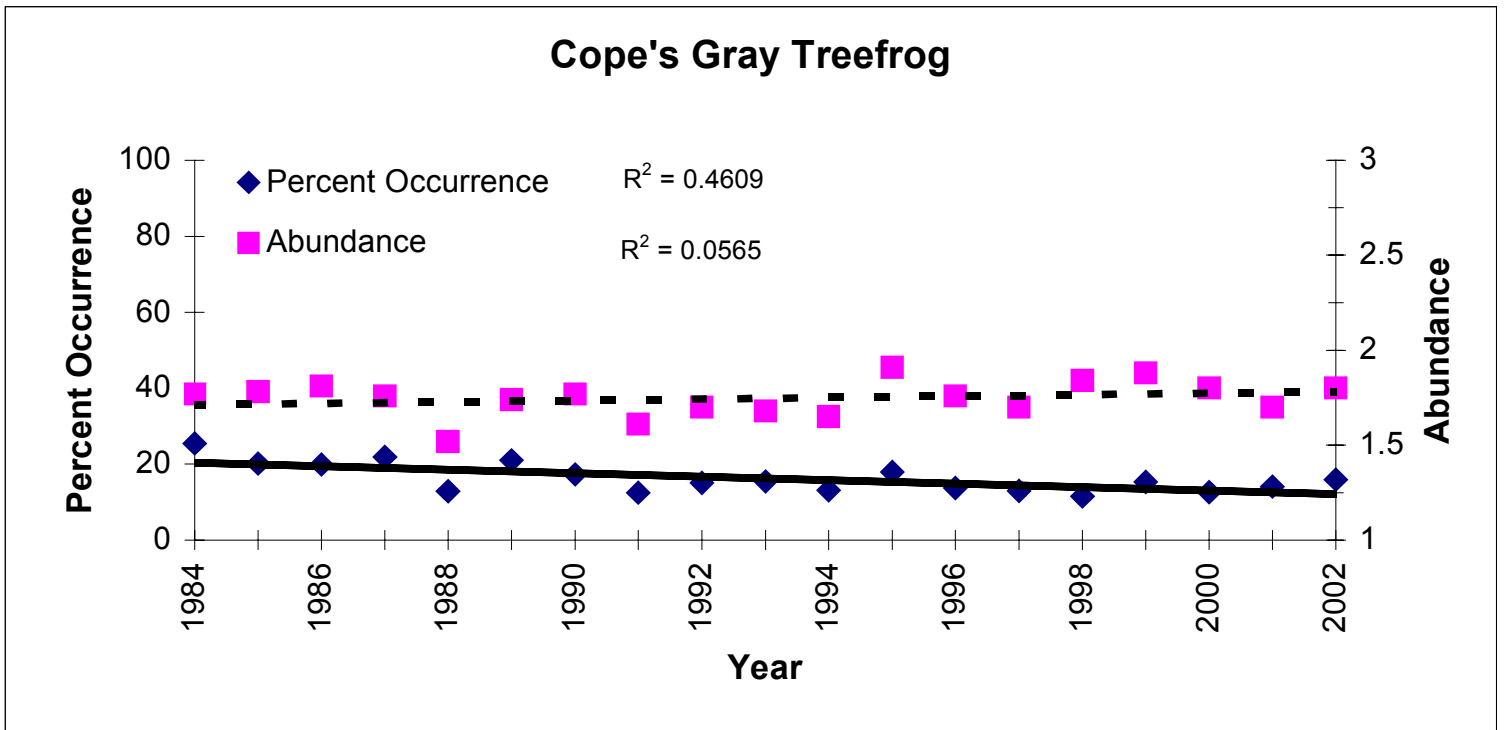


Figure 3. Continued.

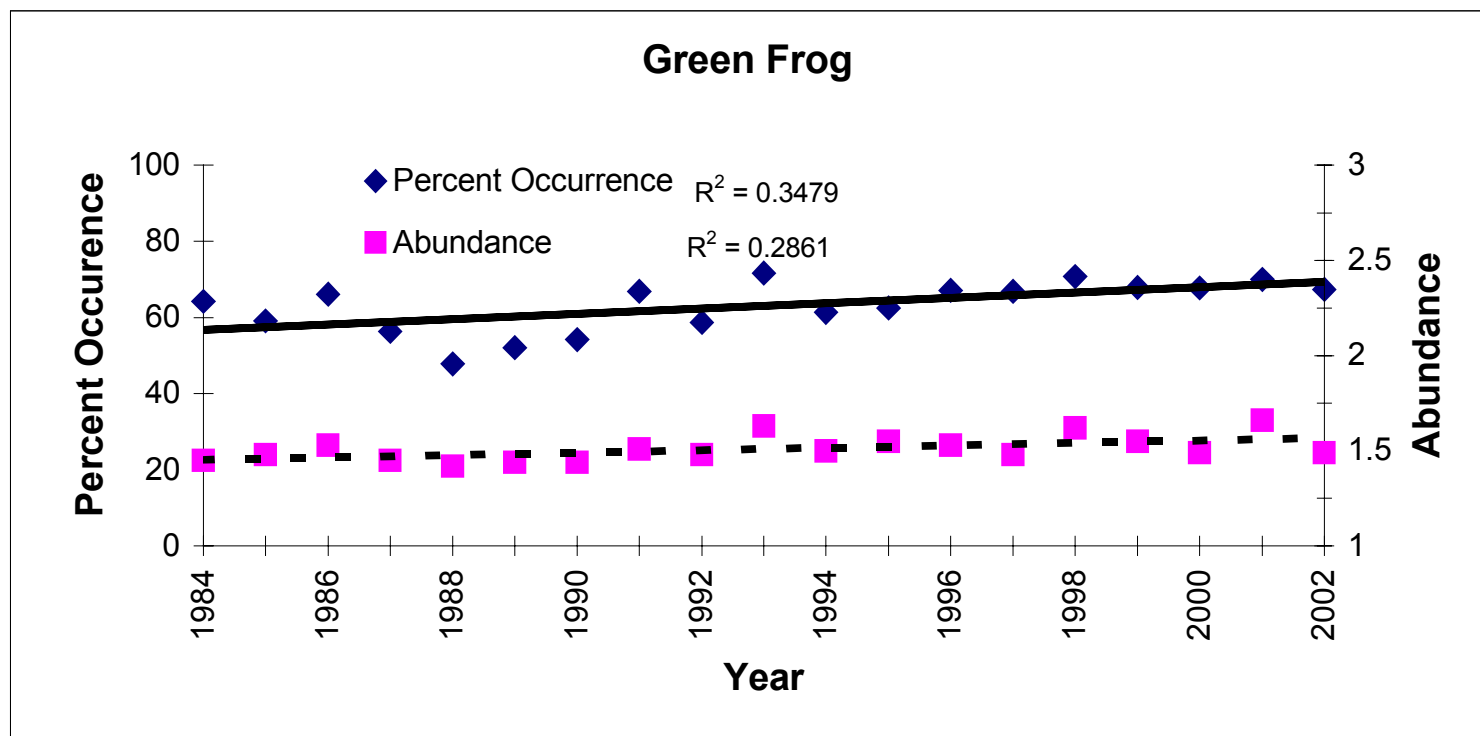
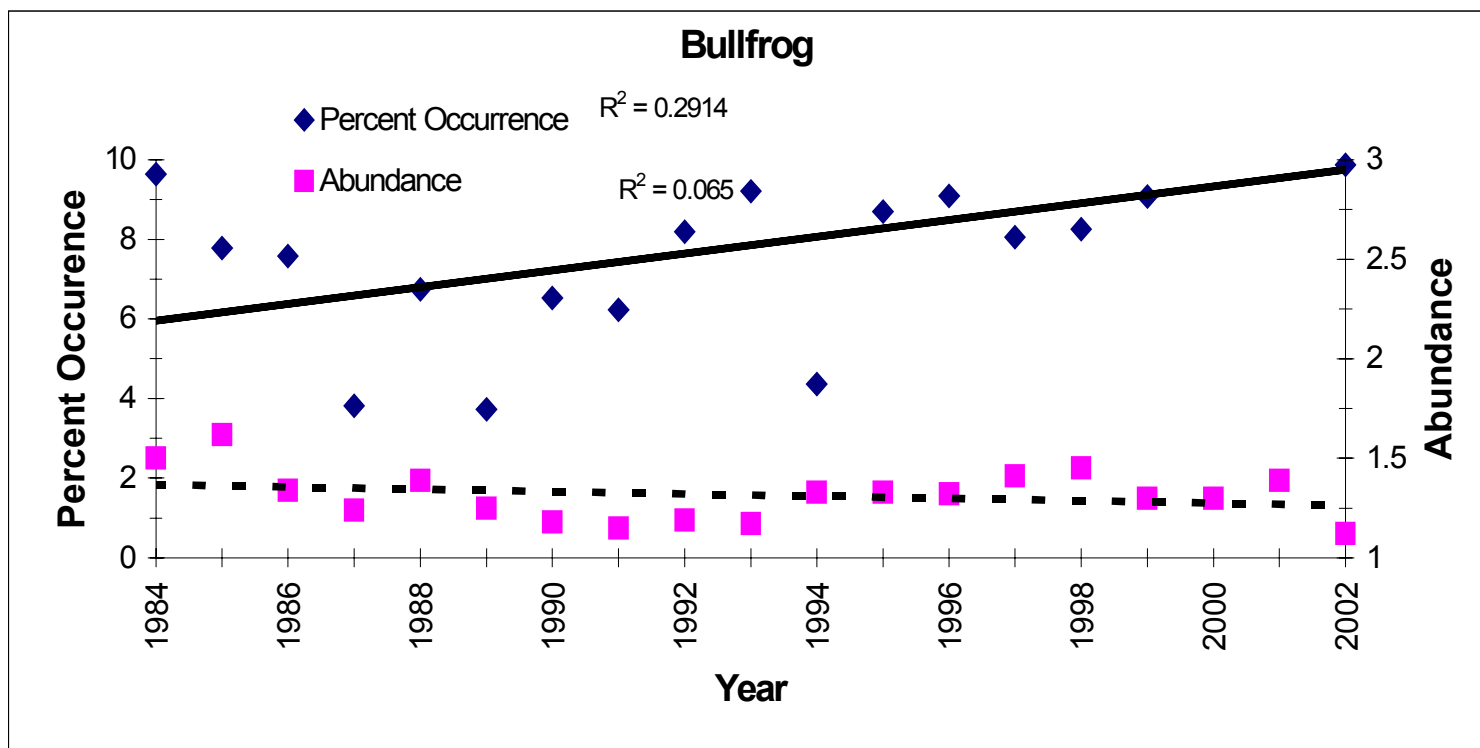


Figure 3. Continued.

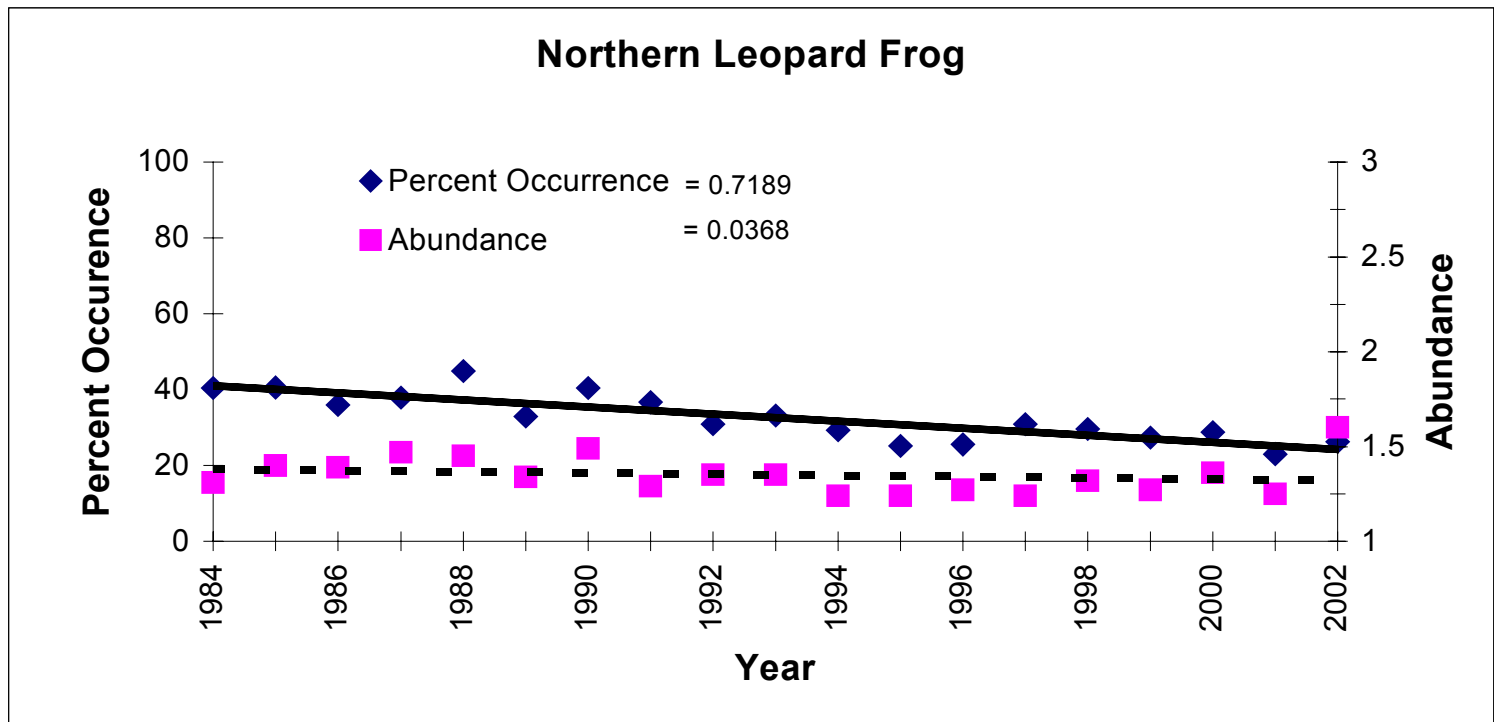
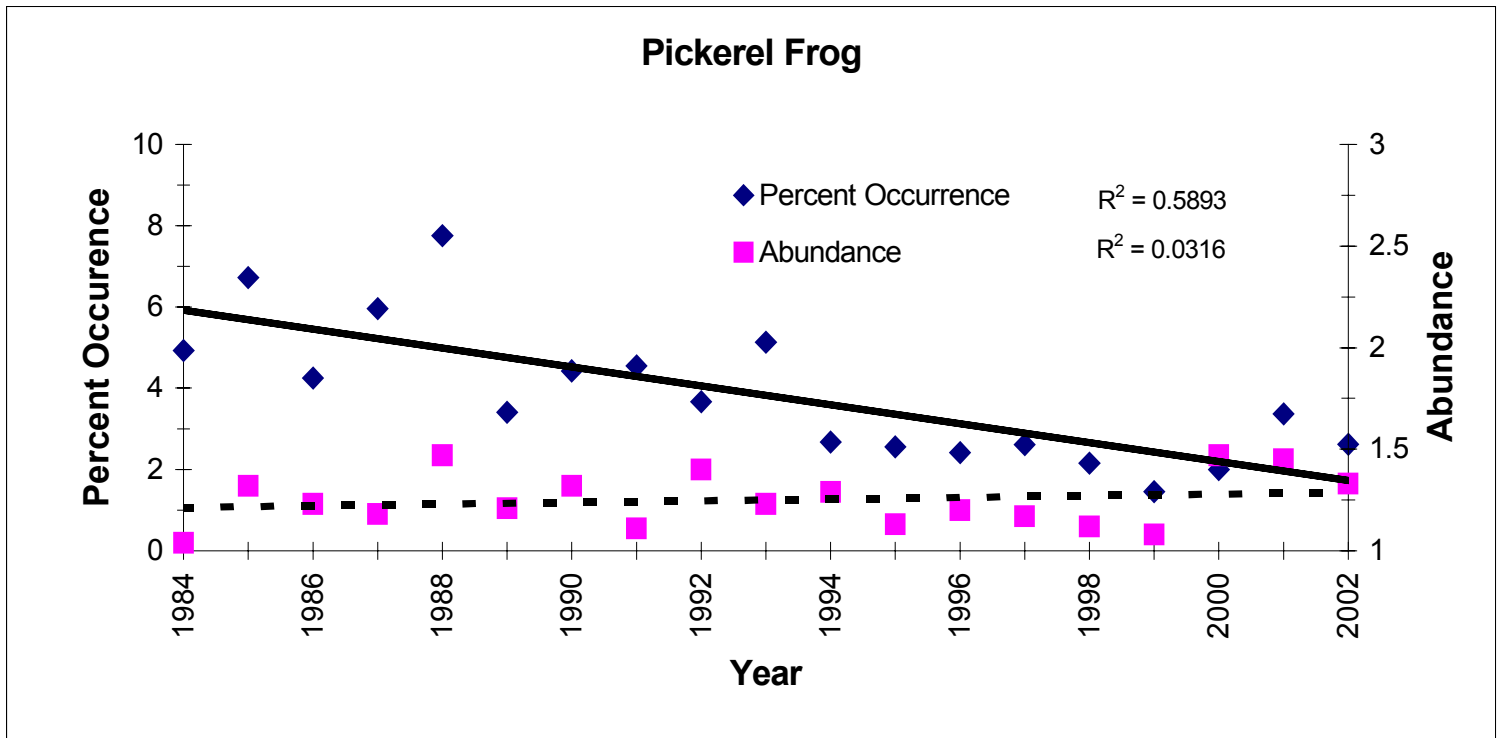
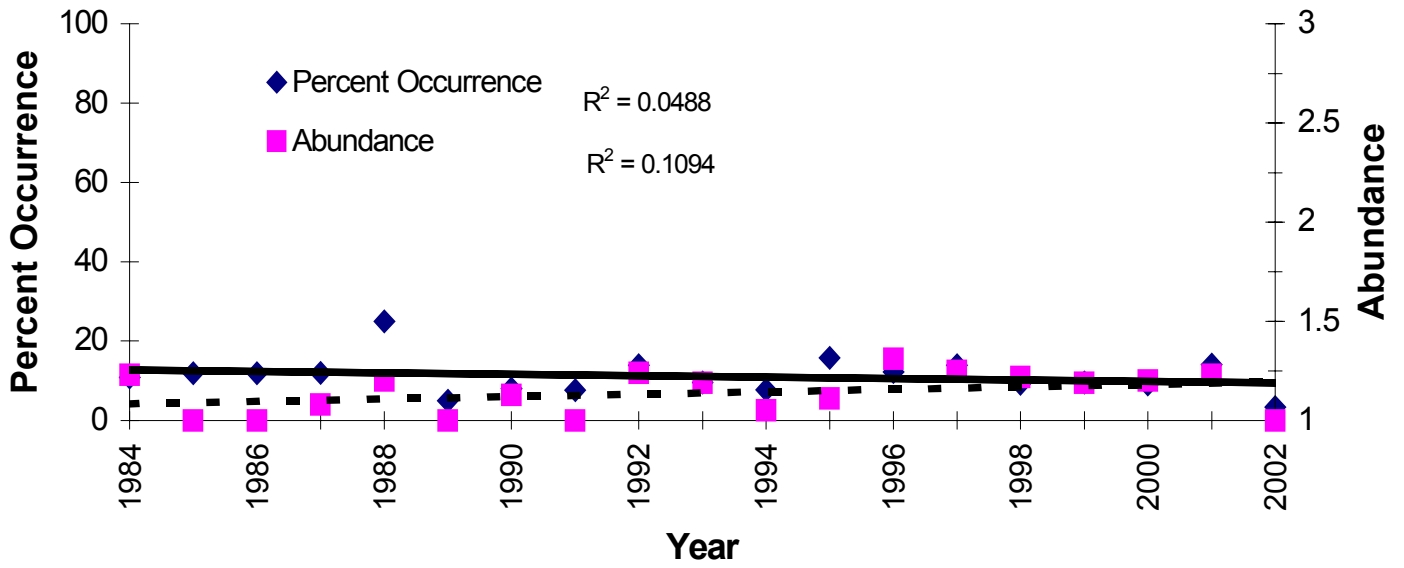


Figure 3. Continued.

### Mink Frog



### Wood Frog

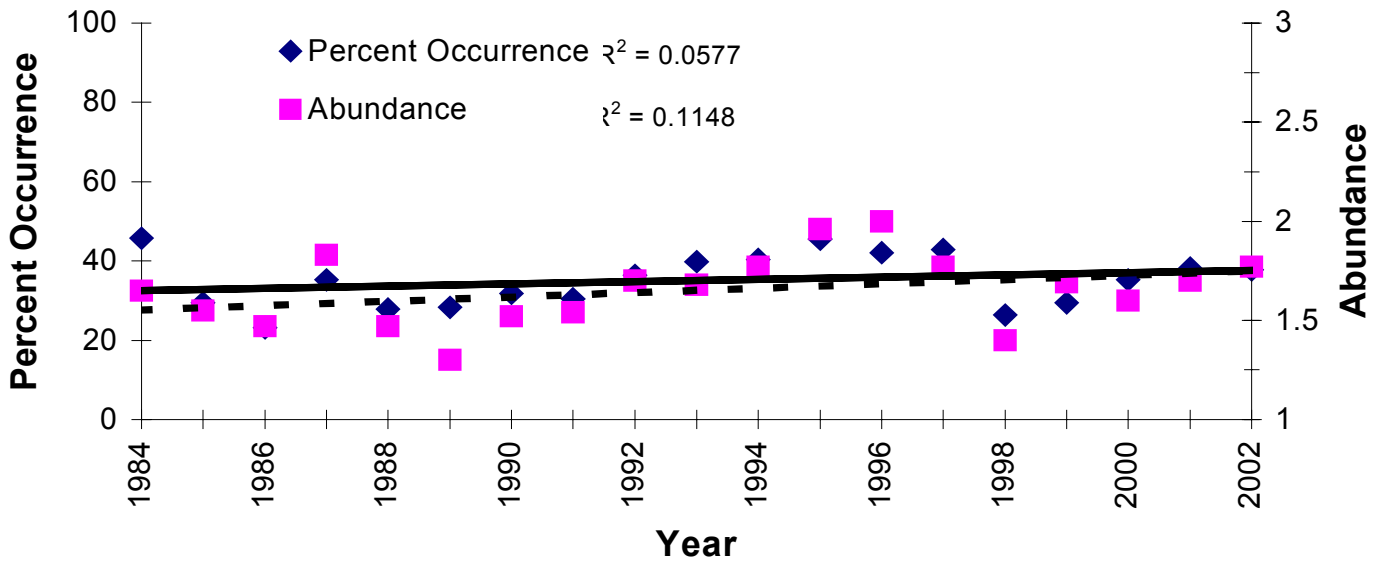


Figure 3. Continued.